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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,961	07/31/2001	Aaron Valdivia	PD-200257	2564

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EXAMINER	
HAQ, MOHAMMAD AAMIR	
ART UNIT	**PAPER NUMBER**
2614	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/918,961	VALDIVIA ET AL.	
	Examiner	Art Unit	
	Aamir Haq	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/19/2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,15-20 and 27-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,15-20 and 27-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/18/2006 has been entered. Claims 1 – 10, 15 – 20, and 27 – 33 are now pending in the present application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 – 6, 8 – 10, 15 – 20 and 27 –28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,366,761 (Montpetit) in view of US 2005/0197134 (McKenna).

As to claims 1, 9, 15, 27, 28, Montpetit discloses a system for providing automated distributed provisioning satellite resources in a satellite communication network comprising:

- at least one satellite (see figure 10 of Montpetit), said satellite comprising a plurality of antenna elements for receiving transmissions (satellites inherently contain antennas for transmitting and/or receiving signals) from geographically

distinct cells (see figures 1 and 2 of Montpetit), a plurality of demodulators each adapted to demodulate signals in a particular frequency band (65, 69 and 89 in fig. 10 of Montpetit), a switch matrix for connecting said antenna elements to said demodulators (67 in fig. 10 of Montpetit), and a payload processor for configuring said switch matrix to configure said satellite requires as a payload configuration (81, 83 and 85 in fig. 10 of Montpetit), wherein said resources comprise a plurality of channels for transmitting information to or from said satellite.

- a satellite resource allocation plan, comprising information related to the payload configuration over time and an allocation of satellite capacity pools amongst a plurality of remote network operators at geographically distributed locations (col. 2 line 53 – col. 3 line 23 and col. 15 lines 30 – 56 of Montpetit)
- determine whether said capacity allocation plan can be fulfilled based on a plurality of system constraints including the satellite resource allocation plan (fig. 9 and col. 11 lines 4 – 27 of Montpetit) to update the satellite resource allocation plan based on results of the determination and to send commands to said payload processor in order to modify the payload configuration to satisfy the capacity allocation plan (fig. 9 and col. 11 lines 4 – 27 of Montpetit). Note that it is inherent that if a new bandwidth plan is allocated (in response to a request) the "payload" will be reconfigured to adapt to the new bandwidth parameters.

Silent on:

- a capacity management unit having a plurality of network interfaces accessible by the remote network operators, wherein the capacity management unit is

adapted to automatically receive a capacity allocation plan from any one of the remote network operators requesting a capacity allocation within one or more capacity pools allocated to said one network operator.

However, McKenna discloses:

- a capacity management unit having a plurality of network interfaces accessible by the remote network operators, wherein the capacity management unit is adapted to automatically receive a capacity allocation plan from any one of the remote network operators requesting a capacity allocation within one or more capacity pools allocated to said one network operator (¶0123 – 0129, 0120, 0114 and 0118 of McKenna)

Montpetit and McKenna are analogous art because they are from the same field of endeavor, namely bandwidth on demand in communication systems. At the time of the invention it would have been obvious to a person of ordinary skill in the art to receive capacity allocation requests from remote operators that are accessible to graphical user interfaces in the system of Montpetit in view of the teachings of McKenna. The motivation for doing so would have been to enable remote operators to request additional bandwidth in advance or real time (¶0120 of McKenna) to meet their needs for unexpected situations and for anticipated situations that require additional bandwidth (¶0123 – 0129 of McKenna). McKenna teaches allocating bandwidth in real time and in advance (¶0120 of McKenna) via a GUI. Specifically, McKenna states "imagine a GUI that displays all of the cells available for a broadcast/narrowcast wherein an operator can select given cells to form a narrowcast region . . . the operator

defines the time window for a narrowcast" (¶0129 of McKenna). Montpetit teaches the need for user's to be able to request bandwidth on-demand (col. 2 lines 41 – 55 of Montpetit) and therefore contemplated the necessity of providing users with a method to request bandwidth proportional to their current or anticipated needs. Thus, the combination of Montpetit and McKenna would provide a method for a user to access a GUI to request additional satellite bandwidth in real time and in advance.

As to claims 2, 3, and 8, McKenna teaches that the network interface can be accessed via a local area network or wide area network (107 and 120 in fig. 1 of McKenna).

As to claims 4 – 6, 10 and 16 – 20, Examiner takes official notice that it would have been obvious to one of ordinary skill in the art at the time of the invention that the provisioning or bandwidth on-demand of satellite resources is directly correlated to physical satellite constraints (i.e. number of antennas, demodulators, and switches). Obviously, a satellite can only allocate resources that are within the satellites physical limitations. Components such as antennas, switches and demodulators have maximum capabilities that cannot be exceeded. Therefore, the satellite must adhere to these limitations and not allocate resources above the components thresholds. Furthermore, the satellite must determine whether the components are capable/available to perform the required task before allocating.

Additionally, Montpetit teaches:

> Returning to FIG. 11B, the BAP references the portion of a bandwidth allocation request requesting bandwidth for packets with the highest priority status (block 214). The BAP evaluates the bandwidth allocation request and determines whether uplink

transmission capacity is available for the amount of bandwidth requested (block 216). More particularly, the BAP searches a current bandwidth allocation data structure (e.g., the table in FIG. 7) to determine whether sufficient slots are available to be allocated to the requesting terminal for uplink transmission of data packets having the particular designated priority status. For example, in processing the bandwidth allocation request 250 (FIG. 12), the BAP determines whether eight slots are available in the bandwidth allocation table for GT.sub.2 to transmit eight P1 data packets. For the sample bandwidth allocation table shown in FIG. 7, available slots include the unallocated slots indicated with an entry of "0." Furthermore, as part of determining whether uplink capacity is available, the BAP also checks with a demodulator controller 89 (FIG. 10) that controls the uplink demodulator/decoder 69 to ensure that the demodulator/decoder 69 will be capable of handling the incoming uplink transmission at the time it arrives. If enough slots are available to accommodate the bandwidth allocation request, the BAP allocates the number of needed slots to meet the request (block 218). In that regard, information is entered into the table identifying the ground terminal to which the slots are allocated and the priority status of the data packets to be transmitted in those slots.(col. 15 lines 30 - 56 of Montpetit).

Thus, the allocation of bandwidth is determined based on satellite resource allocation including information related to satellite capacity.

As to claim 7 and 29, Montpetit and McKenna have been discussed above. Specifically, see the rationale for the rejection of claim 1. McKenna teaches a operator, read as the claimed network engineer, accesses a GUI to modify bandwidth distribution and allocation in real time and in advance.

As to claims 30 - 34, McKenna has been discussed above. McKenna teaches that operators can access a GUI, read as the claimed network interface, "that displays all of the cells available" (¶0129 of McKenna) for capacity allocation. Additionally, McKenna teaches that the operator defines a "time window" for the narrowcast including

a "start time" and "end time" (see ¶0130 – 0137 of McKenna). Moreover, McKenna teaches that an operator can make adjustments to a given cell or a cell grouping.

Response to Arguments

3. Applicant's arguments filed 12/18/2006 have been fully considered but they are not persuasive and are moot in view of the new grounds of rejection. However, one argument related to Montpetit will be addressed below.

Applicant has argued that the prior art of record fails to teach the following limitation recited in the independent claims:

"A satellite resource allocation plan, comprising information related to the payload configuration over time and an allocation of satellite capacity pools amongst a plurality of remote network operators at geographically distributed locations"

Applicant has stated: "Nowhere in this section is allocation of bandwidth determined based on referencing a satellite resource allocation plan that includes information related to payload, and the allocation of satellite capacity pools amongst a plurality of remote network operators."

The Office respectfully disagrees. Montpetit teaches (note that the BAP is the bandwidth allocation processor):

> Returning to FIG. 11B, the BAP references the portion of a bandwidth allocation request requesting bandwidth for packets with the highest priority status (block 214). The BAP evaluates the bandwidth allocation request and determines whether uplink transmission capacity is available for the amount of bandwidth requested (block 216). More particularly, the BAP searches a current bandwidth allocation data structure (e.g., the table in FIG. 7) to determine whether sufficient slots are available to

be allocated to the requesting terminal for uplink transmission of data packets having the particular designated priority status. For example, in processing the bandwidth allocation request 250 (FIG. 12), the BAP determines whether eight slots are available in the bandwidth allocation table for GT.sub.2 to transmit eight P1 data packets. For the sample bandwidth allocation table shown in FIG. 7, available slots include the unallocated slots indicated with an entry of "0." Furthermore, as part of determining whether uplink capacity is available, the BAP also checks with a demodulator controller 89 (FIG. 10) that controls the uplink demodulator/decoder 69 to ensure that the demodulator/decoder 69 will be capable of handling the incoming uplink transmission at the time it arrives. If enough slots are available to accommodate the bandwidth allocation request, the BAP allocates the number of needed slots to meet the request (block 218). In that regard, information is entered into the table identifying the ground terminal to which the slots are allocated and the priority status of the data packets to be transmitted in those slots.(col. 15 lines 30 - 56 of Montpetit).

Thus, the allocation of bandwidth is determined based on satellite resource allocation including information "related" to payload and allocation of satellite capacity.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,561,841 (markus) teaches using a GUI to manipulate a cell area and cell parameters. US 6,047,186 (Yi et al.) teaches using a GUI to manipulate a cell area and cell parameters. US 6,336,035 (Somoza et al.) teaches a tool for wireless network planning. US 6,771,966 (Chow) teaches a network planning tool and GUI.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aamir Haq whose telephone number is 571-272-5511. The examiner can normally be reached on Mon thru Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on 571-272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A.H.
March 16, 2007

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